

AUTOMOBILE SECTION

Auto Quiz

ANSWERS TO LAST WEEK'S QUESTIONS.

1. Seven possible causes of a motor overheating are: Fan belt broken or slipping; gas mixture too rich; cylinders choked with carbon; too little water in cooling system; water circulation stopped, which may be due to clogged pipe or pump not working; not enough oil in the motor; and the ignition coming too late in the cylinders.

2. Running a car with the starter motor puts on the battery an unusual strain, which will quickly weaken it.

3. A well taken care of car needs but little attention in the spring other than those things which are necessary in the change from cold to warm weather driving. The oil should be drained from the crank case, which should be flushed out with kerosene and then filled with the summer grade of oil. This is a good time to have any carbon removed from the cylinders. Drain out the anti-freeze solution from the cooling system and clean it by putting in dissolved washing soda. Use a pound for a small motor and two pounds for a large one. After a day's run with the soda in, drain it out, flush and replace with clean water. Then clean the gears and differential and change to a heavier summer oil. These are the important things to do in the spring after all danger of freezing weather has passed. Filling of grease cups,

lubrication of springs and inspection of tires are not only spring but all year round jobs.

4. It is best to store tires where there is no light and there is an even temperature of about 50 degrees. If the castings contain inner tubes, inflate them slightly.

5. The facing of a cone clutch should not be oiled. Oil on the surface would cause slipping and loss of driving power.

6. The parts of the electric system which need oil are: Bearings of the magneto, starting motor and generator, and the rotating parts of the timer and distributor. Use very little and use thin oil.

7. The chassis of an automobile is composed of the motor, transmission and differential gears, axles, driving shaft, the frame, springs, wheels, complete, gas tanks, radiator, steering gear, exhaust pipe and muffler.

8. An automobile accessory is a part of equipment or an article not absolutely necessary for the operation of the car or in compliance with law and in regard to safety.

9. The parts of a motor hardest to lubricate are the cylinders, because of the great heat generated in the combustion chamber. This makes distribution of lubricating oil on these surfaces the hardest of any part of the motor.

10. Dual or two-point ignition means ignition of the gas charge in the cylinders with the simultaneous sparking of two sets of spark plugs.

THIS WEEK'S QUESTIONS.

1. How is early steering made possible?
2. Are springs secured rigidly to the rear axle of a car?

3. What is meant by brake torque? Driving torque?

4. What is an overhung frame? An underhung?

5. What is the greatest degree of slant at which a car can be driven without danger of overturning?

6. Name seven things which will cause a motor to knock.

7. Why is rubber hose used instead of solid metal to connect the inlet and outlet of the motor water packet and radiator?

8. How is fuel fed to the carburetor when the carburetor is placed higher than the gasoline tank?

9. What are causes of one lamp not lighting or burning unsteadily while the other lights are burning properly?

10. What two things will cause explosions in the muffler?

HOW TO USE WORNOUT TIRES

Wornout inner tubes, which usually are thrown into an out-of-the-way corner of the garage or sold to the junk man, deserve a better fate. Just like milady's hairpins, says the Diamond Rubber Company, they can be used for a thousand and one things other than that for which they were intended.

Properly patched and inflated, they make excellent life preservers, cushions for easy chairs or swings for babies. If cut crosswise they make excellent rubber bands. Pieces of tubes may be cut with scissors and used in an emergency for washers. Strips of rubber for winding hammer and ax handles may be obtained by starting at the end and cutting spirally around the tube.

Innumerable other ways for using the tubes will present themselves once the owner gets out of the habit of considering them worthless. Even the valve stems can be used again to replace a damaged stem in a good tube.

GOODYEAR AFTER FIRST HONORS

More and more the desirability of having employees become stockholders is being impressed upon industrial concerns in this country. The United States Steel Corporation has the largest number of employee-stockholders, but the Goodyear Tire & Rubber Company is pressing hard for premier honors. Although in the last sale of preferred stock 17,400, or 60 percent, of the Goodyearites subscribed, the company will start a drive to have every worker own stock by the end of 1920. Three more sales will be held, in March, June and December, on the plan of paying for the stock by pay deductions, so that complete payment will be made within a period of two years. Officials are sanguine that nearly all the company's employees will own stock within the next twelve months.

NEW BUILDINGS ADDED TO BIG FRANKLIN PLANT

The construction of new buildings at the plant of the Franklin Automobile company at Syracuse is progressing rapidly. A large new seven-story building, costing \$400,000, has just been completed and occupancy taken, and another story is being added to building Z, now the largest of Franklin buildings.

Building Z will soon lose this distinction, however, with the completion of another large seven-story building now under way. This building will, when completed, contain 550,000 square feet of floor space and will cost \$500,000. It will be ready for occupancy about July 1.

A new powerhouse and heating plant is also being built at a cost of \$400,000, including the equipment. The chimney to be used in connection with this later building will be 250 feet high.

FUEL IN CARBURETOR

If the fuel in the carburetor is not at the proper level it will cause various reactions. If the level is too high it will flood the carburetor; if it is too low it will result in a lean mixture and difficult starting. For satisfactory operation it is important that the float be adjusted so that the gasoline level be about a third-second of an inch below the outlet of the lowest nozzle.

tomobiles, the Pickwick-White Star United States decided to give the Cadillac a try-out. The result was that they are now said to be using very type of car exclusively," said C. H. Conliffe, manager of the Chicago Cadillac branch.

Stage Company Operates Twenty-one Cadillacs

Over a beautiful mountain scenic route between San Diego and El Centro, in California, a distance of 125 miles, twenty-one Cadillacs make daily trips on a six-hour-and-thirty-minute schedule, including a half-hour for meals.

"About two years ago, after having experienced with various makes of automobiles, the Pickwick-White Star United States decided to give the Cadillac a try-out. The result was that they are now said to be using very type of car exclusively," said C. H. Conliffe, manager of the Chicago Cadillac branch.

"In addition to the fact that the use of Cadillacs makes it possible for them to maintain their schedules, another worth-while advantage was that they were not continually delayed by stopping to replenish the water in the radiators, not withstanding the long steep grades.

"The regular seven-passenger cars are employed, which, in addition to carrying usually the full complement of passengers, are generally well loaded with baggage."



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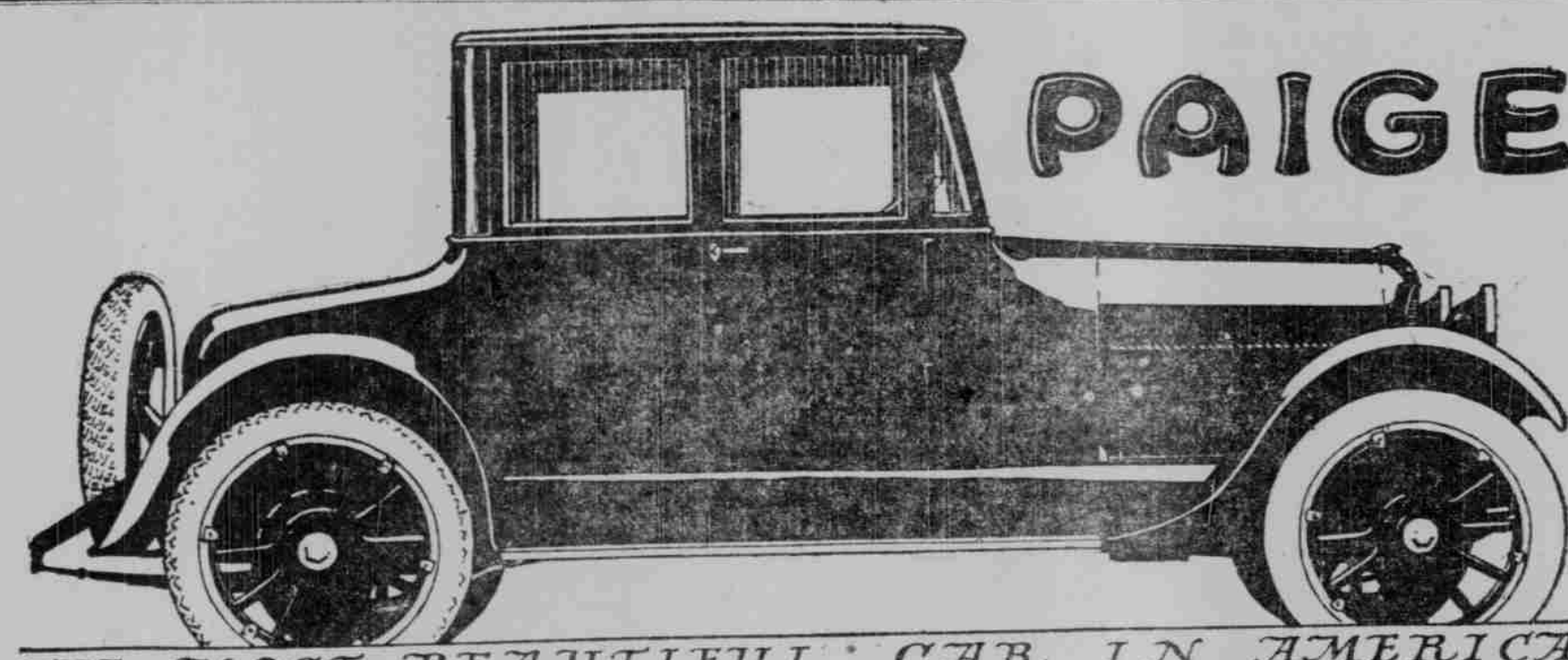
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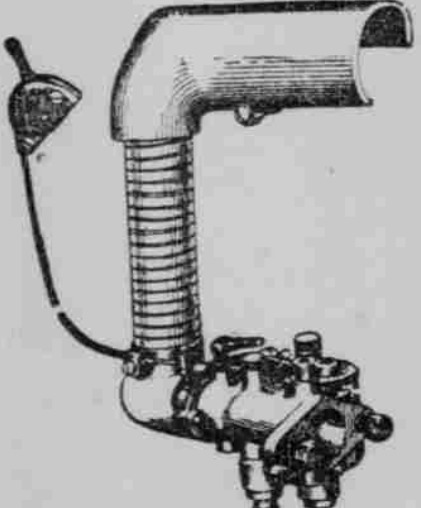


Fords Start Easily with the New Rayfield Carburetor

ON the new Rayfield plain tube carburetor for Fords, there is a choker valve operated both from the dash and by means of a choker wire to the front of the car for hand cranking. This, together with the two adjustments, one for idling and one for high speed, makes starting easy.

Years of experience in building high-grade carburetors have gone into the design and construction of this Rayfield model for Fords.

Come in and let us explain other features which go to make this the most satisfactory carburetor for Fords on the market.



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